

Appl. No.: 09/864,103
Amdt. Dated July 23, 2003
Reply to Office action of Feb. 25, 2003
Group Art Unit: 3712

Patent
12798.0004

Amendments to the Specification:

Please replace paragraph 2 with the following amended paragraph:

The present invention relates to vibration dampeners, and more specifically to archery bow dampeners for torque and vibration reduction of the bow limbs and ~~dampening and absorbing shocks and vibrations~~, in various parts of the bow.

B1
As the ~~an~~ arrow is released from the ~~a~~ bow and immediately afterwards, an extreme vibration is generated in different parts of the bow. The shock is created due to the abrupt return of the limbs and the string of the archery bow to their original positions. ~~†This shock~~ robs the arrow of energy and negatively effects the accuracy and speed. ~~†~~ In addition, the shock effects the joints of the archer in an adverse way. ~~†and may loosens up components of the bow and it and/or shortens the life of the bow limbs.~~

Please replace paragraph 3 with the following amended paragraph:

B2
To overcome this problem, dampeners, which were developed for non-archery applications, have been applied to archery bows for absorbing longitudinal vibrations. However, none have overcome adequately the problem of reducing torsional vibration of the limbs as well as the longitudinal vibrations. Also, the vibration mode is complicated; bow limbs tend to oscillate independently of each other resulting in a mixed vibrational mode of limbs twisting and bending simultaneously, thereby requiring multiple dampening devices.

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Amendments to the Summary of the Invention:

Please replace paragraph 8 with the following amended paragraph:

33 The objects set forth above as well as further and other objects and advantages of the present invention are achieved by a dampening system that dampens the vibrations generated by the limbs of the bow. ~~It could~~ The dampener may be applied in various locations of the bow (e.g. limbs, riser, accessories, etc.), where vibration is a present. The general shape of this device is a wedge or combination of wedges made of a single elastomeric material or a combination of elastomers. The device takes the form, in some preferred embodiments, of a base portion affixed to a limb and a portion suspended over the limb. There are many variations of the volume proportions of the area of the base portion that comes in direct contact with the limb and the proportion that is suspended above the limb. Also, where multiple elastomers are used the combination of different Shore hardness of the elastomers can range from 0-60. The preferred form of such a wedge device is approximately 65mm long by 15mm wide and 25mm high, but dimensions can vary depending on the size and power of the bows and cross bows.

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Amendments to the Brief Description of the Drawings:

Please replace paragraph 14 with the following amended paragraph:

B4 FIG. 8 is a perspective view of a bow test rig having a bow position thereon.

Detailed Description of the Preferred Embodiments:

Please replace paragraph 15 with the following amended paragraph:

B5 FIGS. 1 and 2 illustrate a bow with the device (10) of a preferred embodiment of the invention placed symmetrically on the bow. The dampener is shown further in FIGS. 3-5 to have a base section 12 and an extending substantially triangular extension (wedge end) 14. A plate 13 (FIG. 3) is provided on the base portion connected thereto and has having an adhesive face A (which can be overlaid with a protective liner (not shown) - for storage and transport). Although, this is the preferred method of attachment it is not the only method. The device can be attached to the bow by other suitable means of adhesion or fastening.

Please replace paragraph 16 with the following amended paragraph:

B6 FIG. 6 shows another form 110 of the device with an insert 116 in a wedge portion 114. The device consists of two parts made of elastomer with different durometers. A base 113 of a shortened length of the device adheres to the bow. The other half part of base ~~113~~ 112 and its 114 extension including insert 116 is suspended above the limb. The device has a flexible plastic plate 113 permanently attached to it. On the bottom of the plate 113 is adhesive tape A for securely attaching the device to the bow.

Please replace paragraph 17 with the following amended paragraph:

B7 Fig. 7 shows another embodiment 24210 of the device with an insert 216 made of elastomers of different durometers. The entire length of the bottom of the device

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plate 213 ~~with~~ of the base 212 includes an adhesive A adhered for affixing the device to
the bow.